

WHAT IS CLAIMED IS:

1. An aluminum alloy-and-resin composite comprising:  
a shaped aluminum alloy material that has been  
subjected to a dipping process in which it is dipped in an  
5 aqueous solution of at least one selected from the group  
consisting of ammonia, hydrazine, and a water-soluble  
amine compound; and

a thermoplastic resin composition integrally bonded  
to a surface of said shaped aluminum alloy material, said  
10 thermoplastic resin composition containing polyphenylene  
sulfide as a component.

2. An aluminum alloy-and-resin composite comprising:  
a shaped aluminum alloy material that has been  
subjected to a dipping process in which after it has been  
15 dipped in a basic aqueous solution and/or an acid aqueous  
solution for pretreatment, said shaped aluminum alloy  
material is dipped in an aqueous solution of at least one  
selected from the group consisting of ammonia, hydrazine,  
and a water-soluble amine compound; and

20 a thermoplastic resin composition integrally bonded  
to a surface of said shaped aluminum alloy material, said  
thermoplastic resin composition containing polyphenylene  
sulfide as a component.

3. An aluminum alloy-and-resin composite according  
25 to claim 1 or 2, wherein said thermoplastic resin  
composition has a fibrous filler and/or a powder filler  
added thereto to improve mechanical properties.

4. An aluminum alloy-and-resin composite according

to claim 3, wherein said fibrous filler is at least one selected from the group consisting of glass fiber, carbon fiber, and aramid fiber, and said powder filler is at least one selected from the group consisting of calcium carbonate, magnesium carbonate, silica, talc, glass, and clay.

5        5. A production method for an aluminum alloy-and-resin composite, comprising the steps of:

             dipping a shaped aluminum alloy material in an  
10        aqueous solution of at least one selected from the group consisting of ammonia, hydrazine, and a water-soluble amine compound;

             inserting said shaped aluminum alloy material into a mold; and

15        integrating a thermoplastic resin composition containing polyphenylene sulfide to said shaped aluminum alloy material in said mold.

             6. A production method for an aluminum alloy-and-resin composite, comprising the steps of:

20        dipping a shaped aluminum alloy material in a basic aqueous solution and/or an acid aqueous solution for pretreatment;

             dipping said shaped aluminum alloy material after said pretreatment in an aqueous solution of at least one  
25        selected from the group consisting of ammonia, hydrazine, and a water-soluble amine compound;

             inserting said shaped aluminum alloy material into a mold; and

integrating a thermoplastic resin composition containing polyphenylene sulfide to said shaped aluminum alloy material in said mold.

- 5 7. A production method for an aluminum alloy-and-resin composite according to claim 5 or 6, wherein said thermoplastic resin composition is integrated to said shaped aluminum alloy material in said mold by injection molding, heat pressing, or co-extrusion.